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Interoffice Memo



LONE STAR INDUSTRIES, INC.

Originating Office: P&PE Depart. - Greenwich

Date: August 8, 1979

TO: Mr. E. Buttiker
FROM: D. R. Bailey
SUBJECT: Seattle Plant Visit
Kiln/Cooler Condition

This memo is to record, in general terms, conditions of both kilns and coolers as found during a plant visit to Seattle on August 2, 1979.

Summary

General condition of kilns and coolers is very poor. They are as bad as I have seen. To continue operation, with a fair degree of reliability, will require major repairs. Conditions stated below are not criticism of existing plant management and should be considered in light of the old age of the equipment and the depreciation and deterioration that occurs with time and use.

Conditions Observed

Kilns

1. Kiln shells are warped and wear is extensive in chain area. Past history of first pier structural problems indicates kiln is warped and shell is curved. Shell replacements would approximate one-half the length of the kilns.
2. Trunnion rolls and bearing housings are cracked and broken. Chunks of metal are actually broken out of many rolls. Adjustments to certain trunnion rolls are nearly impossible. Near total replacement is needed.
3. Thrust roll mechanisms are cracked and broken loose from the anchor bolts. Replacement is needed. The mechanism can be seen moving as the kiln turns.
4. Riding ring faces are worn and no longer straight. Many cracks are apparent. Riding ring pads are cracked, welds are broken and some pads are laying crooked under the riding rings. The metal wear between pads and tires at the fourth pier is much too great. New riding rings with new pads are required.
5. Gearing, although difficult to see through the protective grease, looks worn with tooth profiles worn to a great extent.

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August 8, 1979

6. Air seals at both ends of the kilns need new seal arrangements.

Rotary Clinker Coolers

1. Lower sections of cooler shells have been replaced, but alignment is deficient. This is being worked on by George Schneider and the plant.
2. Cooler gearing and gear flanges are in very poor condition. Gears are scheduled to be replaced. Gear flanges, which hold the gear to the shell, also need replacement as they are broken. Splice plates have been used to hold the flanges together.
3. Gear reducer drives appear quite old and may or may not be reliable. They probably are not.

Recommendations

The plant, as discussed at the August 2 meeting, should consider bringing in a kiln and cooler manufacturer to survey the kilns and coolers. A recommendation could be obtained as to specific repairs and replacements needed for reliable operation along with cost estimates for inclusion in the plant's capital budget requests. That approach would move us from a subjective estimate to an objective, concise estimate of the costs involved in rehabilitating the Seattle burning department. The study could also be used in any long-range studies of the future of the Seattle facility.

DRB:bhm

cc: M. M. Reid
A. C. Imhoff

David R. Bailey

Dave